1877MNRAS..37..347P

The Planet Vulcan. By the Rev. S. J. Perry.

The weather was exceedingly favourable here for the search for the intermercurial planet, and a careful watch was maintained throughout the whole of the 21st, 22nd, and 23rd of March. The spider-line micrometer was used with the 8-inch achromatic, and the Sun's image, projected on a screen of very smooth white cardboard attached to the eye-end of the telescope, had a diameter of $9\frac{1}{8}$ inches. An excellent driving clock is attached to the Equatoreal. On the 21st of March the Sun was observed from 9.30 A.M. till 6.3 P.M. G.M.T. Passing clouds obscured the image

	m		h	m		h	m
twice for	10	beginning at	2	49	and at	5	40
twice ,,	15	,, ,,	11	31	,, ,,	3	1
once ,,	23	,, ,,	12	25			

On March 22 the watch was kept up from 7.0 A.M. till 6.10 P.M., with only five breaks of continuity, viz. for

	m		h	m
	12	beginning at	10	34
	14	,, ,,	11	48
	17	,, ,,	10	5
	20	,, ,,	2	8
and	24	,, ,,	12	25

On March 23, from 7.30 A.M. till 1 P.M., there was no interruption, but the Sun was obscured from 1 P.M. till 2^{h} 27^{m}. Clouds also interfered for

m		h	m
10	beginning at	3	10
11	,, ,,	2	37
16	,, ,,	3	42

Observations were discontinued at 5.10 P.M. on account of the indistinctness of the image.

I have given above only the times when the Sun was obscured for at least 10^{m}; other lesser interruptions from small passing clouds were accurately noted, but it does not seem necessary to reproduce them here.

The definition on all three days was generally very good, and the atmosphere quite steady enough for good micrometric measurements. The faculæ around the double group of eight or nine spots on the western limb of the Sun, and the vast group of faculæ without any accompanying spot on the eastern side, were the only features that broke the monotony of the mottled surface during the whole period of observation.

Downloaded from http://mnras.oxfordjournals.org/ by guest on March 24, 2016

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System

1877MNRAS..37..348C

These observations, combined with any other set taken under equally favourable circumstances in this country, would suffice to establish the fact that *Vulcan* did not pass across the solar disk whilst the Sun was above our horizon from the 21st to the 23rd of March 1877.

Stonyhurst Observatory,
1877, *March* 24.

Report of Examination of the Sun's Disk at Guildown, Guildford, on 21st, 22nd, and 23rd March 1877, for the suspected planet Vulcan, with a 3¼-in. Cooke Refractor. Huyghenian eye-pieces 20 and 50. Transit eye-piece about 40. By J. Rand Capron, Esq.

Wednesday, 21*st March* 1877.

9 to 10. Frequent examinations. Sun spot, with group of much smaller ones, well seen near edge of Sun.

10 to 2. Very cloudy, occasional glimpses of Sun's disk through clouds.

2 to 4. Brighter, but still cloudy, allowing of examinations from time to time; practised photo-plates with larger telescope (8¼-inch reflector).

Thursday, 22*nd March.*

7.10. Sunrise in mist; small spot and faculæ seen on Sun's edge.

7.41. Less mist; spot plainer.

7.54. Mist breaking; Sun's limb sharp; spot and faculæ very distinct.

8.26. Still misty, but spot and faculæ well defined.

9.1. }
9.33. } Sun getting above mist, with bright disk.
10.12. }

10.47. Light misty clouds, but spot well seen.

11.0. }
11.35. } Sun quite bright.

Four Kennett plates taken between 9.30 and 11.30 with reflector.

11.52. Sun clouded.

12.20. Kennett plate, No. 5.

12.50. Snow flakes seen crossing the Sun's disk; none fell below.

12.57. Snowdrift continued, and clouds came up.

2.26. Curious cloud shadows overhead.

2.39. Sun's reappearance with bright disk.

Downloaded from http://mnras.oxfordjournals.org/ by guest on March 24, 2016

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System